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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/601,246	07/31/2000	OSAMU WADA	106389	9837

25944 7590 07/30/2003

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

OSORIO, RICARDO

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 07/30/2003

19

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/601,246

Applicant(s)

WADA ET AL.

Examiner

RICARDO L OSORIO

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-11,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-11,13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-11 and 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by McKnight (5,959,598).

Under claims 1, 3, 11, 13 and 14, McKnight teaches of a color display device, or projector (col. 1, lines 27-43, it is inherent that a projection device needs a lens to project the image) comprising a color light generation unit that repetitively generates a plurality of colored lights in a time sequence with a predetermined frequency (col. 12, lines 22-30 and col. 18, lines 20-22); said frequency being equal to or greater than 250 Hz (col. 18, lines 12-65), said colored light generation unit comprising a light source (col. 12, lines 21-24), and a color filter that generates said plurality of colored lights from light coming from said light source (col. 18, lines 19-20); and an image generation unit that processes said plurality of colored lights so as to generate an image corresponding to each of said plurality of colored lights generated in a time sequence (Fig. 6A and col. 18, lines 22-30), said predetermined frequency being at least 180 HZ and reaching 300 HZ or higher display rates (col. 18, lines 12-65).

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Under claim 5, McKnight teaches of said color light generation unit comprising of light sources that emit colored lights different from each other and that turn on in a time sequence (col. 12, lines 22-51).

Under claim 6, McKnight teaches of said image generation unit being a reflection type spatial light modulator (col. 14, line 64-col. 15, line 6).

Under claim 7, McKnight teaches of said spatial light modulator being a liquid crystal device (col. 1, line 40).

Under claim 8, McKnight teaches of said image generation unit being a digital micro-mirror device (col. 1, line 37).

Under claim 9, McKnight teaches of said image generation unit being a transmission type spatial light modulator (col. 14, line 64-col. 15, line 6).

Under claim 10, McKnight teaches of a projection display system (col. 1, line 34). Although, McKnight does not precisely mention of a lens for projecting the image, it is inherent for a projection display to have a lens that is necessary to project the image into the image projection panel.

Response to Arguments

1. Applicant's arguments filed 7/7/2003 have been fully considered but they are not persuasive. Applicant argues that McKnight does not disclose that the color repetition frequency is 250 HZ or more for the color light generation unit and image generation unit.

Examiner disagrees because McKnight teaches of displaying three subframes R, G and B within the duration of a single image which occurs at a rate of 180 HZ (3 times 60 HZ). When interspersing more subframes into the time allotted for the single color image, for example, six,

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nine or even twelve subframes, the rate increases to a much higher rate (above ordinary display rates), which is clearly higher than 300 HZ, for example, six times, nine times, or twelve times 60 HZ). The criticality of increasing the rate is that of reduction of color breakup effects (see col. 18, lines 12-65).

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricardo L. Osorio whose telephone number is (703) 305-2248. The examiner can normally be reached on Mon-Thu from 7:00 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached at 305-4938.

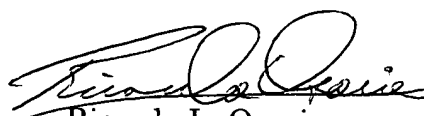
Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to: (703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



Ricardo L. Osorio
Examiner
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RLO
July 29, 2003